

CLAIMS

1. Process for silylating an acylamide, characterized in that an amide bearing a group Rf (perfluoroalkyl) is subjected to the action of a trialkylsilyl halide in the presence of a base whose halide, or hydrohalide, is insoluble in the medium and in the presence of a non-polar and non-hydrophilic solvent.
2. Process according to claim 1, characterized in that the said solvent has a relative dielectric constant epsilon of not more than 5.
3. Process according to claims 1 and 2, characterized in that the said solvent is such that water has a solubility therein of only 1% at most.
4. Process according to claims 1 to 3, characterized in that the said solvent is such that the reaction mixture fully dissolves the silylamide.
5. Process according to claims 1 to 4, characterized in that the said solvent is a mixture.
6. Process according to claims 1 to 5, characterized in that the said solvent is chosen from hydrocarbons, which are advantageously aliphatic and preferably acyclic, silanes and fluorohydrocarbons.
7. Process according to claims 1 to 6, characterized in that the said solvent is chosen from those whose (starting) boiling point is, at atmospheric pressure, not more than about 100°C (advantageously two

significant figures).

8. Process according to claims 1 to 7, characterized in that the said solvent is chosen from those whose (starting) freezing point is, at  
5 atmospheric pressure, not more than 0°C, advantageously not more than -10°C.

9. Process according to claims 1 to 8, characterized in that the said base is an organic base.

10. Process according to claims 1 to 9,  
10 characterized in that the said base is a non-silylable organic base.

11. Process according to claims 1 to 10, characterized in that the said base is an organic base whose conjugate acid is not silylable.

15 12. Process according to claims 1 to 11, characterized in that the said base is a pnictine.

13. Process according to claims 1 to 12, characterized in that the said base is an organic base which contains not more than about 10 (preferably two  
20 significant figures) atoms per basic function.

14. Process according to claims 1 to 13, characterized in that the said base is an organic base which contains not more than about 8 (preferably two significant figures) atoms per basic function.

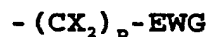
25 15. Process according to claims 1 to 14, characterized in that the said base is an amine.

16. Process according to claims 1 to 15, characterized in that the said amide has the following

formula:



- with x representing 0 or 1;
- with  $\text{R}_1$ ,  $\text{R}_2$  and  $\text{R}_3$  being chosen from alkyl groups
- 5 containing from 1 to 10 carbon atoms, optionally connected to one of the other groups  $\text{R}_1$ ,  $\text{R}_2$  and  $\text{R}_3$ ;
- with Rf (perfluoroalkyl) meaning radicals of formula:



where the identical or different groups X represent a

10 fluorine or a radical of formula  $\text{C}_n\text{F}_{2n+1}$  where n is an integer not greater than 5, preferably not greater than 2;

where p represents an integer not greater than 2;

where EWG represents an electron-withdrawing group

15 whose functions, if any, are inert under the reaction conditions, advantageously fluorine or a perfluoro residue of formula  $\text{C}_n\text{F}_{2n+1}$  where n is an integer not greater than 8, advantageously not greater than 5; the total number of carbons in Rf is advantageously

20 between 1 and 10, preferably between 1 and 5.

17. Process according to claims 1 to 16, characterized in that the said amide is an amide chosen from those of pentafluoropropanoic acid and those of trifluoroacetic acid.

25 18. Composition containing at least 95%, advantageously 98%, of N,O-bis(silyl)amides of pentafluoropropanoic acid or of trifluoroacetic acid.